

1 What Is Claimed Is:

1 1. An apparatus for protecting a MOS component from the antenna
2 effect, the apparatus comprising:

3 a bypass PMOS transistor, having a gate, a source and a
4 substrate, all coupled to a first voltage node; wherein when
5 positive charges are accumulated on the gate of the MOS component
6 due to antenna effect, the bypass PMOS transistor conveys the
7 positive charges to the first voltage node to prevent the
8 positive charges from entering and damaging the MOS component;
9 and

10 a bypass NMOS transistor, having a gate, a source and a
11 substrate, all coupled to a second voltage node; when negative
12 charges are accumulated on the gate of the MOS component due to
13 antenna effect, the bypass NMOS transistor conveys the negative
14 charges to the second voltage node to prevent the negative
15 charges from entering and damaging the MOS component.

1 2. A method for protecting a MOS component from antenna effect,
2 comprising:

3 Disposal, between a first voltage node and the MOS
4 component, of a bypass PMOS transistor the gate, the source
5 and substrate of which are coupled to the first voltage node
6 and the drain of which is coupled to the gate of the MOS
7 component; and

8 Disposal, between a second voltage node and the MOS
9 component, of a bypass NMOS transistor the gate, source and
10 substrate of which are coupled to the second voltage node and
11 the drain of which is coupled to the gate of the MOS component;

12 wherein when positive charges are accumulated on the gate
13 of the MOS component due to antenna effect, the bypass PMOS

transistor conveys the positive charges to the first voltage node to prevent the positive charges from entering and damaging the MOS component; when negative charges are accumulated on the gate of the MOS component due to antenna effect, the bypass NMOS transistor conveys the negative charges to the second voltage node to prevent the negative charges from entering and damaging the MOS component.

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